about

alcohol, tobacco, other drugs, and problem gambling

AADAC

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PREFACE

Quick Facts provides easy-to-read answers to frequently asked questions about alcohol, tobacco other drugs, problem gambling and related issues in Alberta. It does not intend to be the last word, but rather a starting point for learning more about these issues.

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Alcohol

What is alcohol?

- Alcohol is a beverage made by fermenting or distilling grains and fruit. A glass of wine, a bottle of regular beer and 1.5 ounces of hard liquor all have the same amount of alcohol (or ethanol), and act the same in your body.

What happens to alcohol in the body?

- Alcohol is absorbed partially through the stomach and mainly through the intestine into the bloodstream. Once there, alcohol is carried to all parts of the body, reaching the brain almost immediately. It freely crosses the placenta between a pregnant woman and her fetus.
- The alcohol continues to circulate in the bloodstream until it is broken down by the liver, and leaves the body through breath, sweat and urine. The liver breaks down, or metabolizes alcohol at a constant rate. It takes between one and two hours for an adult to metabolize a standard drink.

Are there differences in how alcohol affects men and women?

- Yes. Women tend to feel the effects of alcohol more quickly, and suffer liver, heart and brain damage sooner than men. Generally women have a higher ratio of body fat to water than men. Alcohol does not dissolve in fat the way it does in water. Since women have less water in their body in which to dilute alcohol, they are more affected by it than men are.

- Women also have different levels of enzymes that affect alcohol's absorption and metabolism. These differences may help account for why women experience harmful effects from smaller amounts of alcohol than is the case for men.

What are the immediate effects of drinking alcohol?

- The short-term effects of drinking depend on how much alcohol is in the bloodstream. The amount of alcohol in the blood is called the blood alcohol concentration (BAC) or blood alcohol level (BAL). BAC depends on many factors, including how much and how quickly alcohol is consumed, the drinker's size and gender, and whether there is food in the stomach. For example, a small woman who quickly has three drinks on an empty stomach will have a much higher BAC than a large man having three drinks while eating dinner.
- At a BAC of .04 most people begin to feel relaxed, happy, and less self-controlled. Although small amounts of alcohol usually produce feelings of relaxation and well-being, the drinker's mood and environment can greatly affect their emotional response. Alcohol can also deepen feelings of depression and anger. Even though alcohol is a central nervous system depressant, early effects of drinking may include increased activity and decreased inhibition. These effects result from a depression of brain centres that control behaviour. Even at low BAC's, reaction times, dexterity and perception of distance and pain can be impaired.
- At a BAC of .06, judgment is impaired and people are less able to make rational decisions about their capabilities. Slurred speech and coordination can also occur. Emotions may be exaggerated. Operating machinery can be dangerous. At .08, drinkers have greater perception, judgment and coordination problems. They are legally impaired and may not operate motor vehicles.

- At a BAC of .10, judgment, coordination, reaction time and memory are even more impaired. By .30, loss of consciousness may occur, and above .40, breathing may stop and death can result.
- Heavy drinkers who have developed tolerance to alcohol's effects may not react to the same degree. But tolerance to large amounts of alcohol is an early warning sign for alcohol dependence.

What is low-risk drinking?

- Most Canadian adults are responsible drinkers who drink at safe levels that do not cause problems. This is called "low-risk drinking." Research and clinical experience have shown that heavy drinking greatly increases the risk of injury, health and social problems, and alcohol dependence.
- The definition of "low-risk" and "high-risk" drinking for individuals and society has been debated for a long time. After years of clinical research, however, the Centre for Addiction and Mental Health (CAMH) developed the following recommended Guidelines on Low-Risk Drinking.
  - Limit your weekly intake to 14 standard drinks for men and nine standard drinks for women.
  - All standard drinks have the same amount of alcohol. One standard drink equals 13.6 grams of alcohol. A standard drink is defined as:
    - one 341 ml (12-ounce) bottle of regular strength beer (5% alcohol)
    - one 142 ml (5-ounce) glass of table wine (12% alcohol)
    - one 43 ml (1.5-ounce) shot of liquor (40% alcohol)
  - Drink no more than two standard drinks on any day. When this level is exceeded, take precautions to avoid injuries and other problems.

- Drink slowly to avoid intoxication. Wait at least one hour between drinks and take alcohol with food and non-alcoholic beverages.

People who should not use alcohol, or should drink less than these maximum amounts include

- people with certain health problems, like high blood pressure, liver disease or mental illness;
- people taking certain prescription and over-the counter medications, like sedatives, sleeping pills, painkillers, and cough and cold medicine;
- people with a personal or family history of serious drinking problems;
- women who are pregnant, are trying to conceive or are breast feeding;
- people who are operating vehicles such as automobiles, motorcycles, boats, snowmobiles, all-terrain vehicles or bicycles;
- people who need to be alert - for example, while working with machinery or dangerous equipment, while engaging in challenging physical activities or when responsible for the safety of others or public order.

Is drinking good for your health?

- Low-risk alcohol use can help prevent some types of heart disease. Doctors, however, do not generally recommend that people start drinking for these beneficial effects, which can also be achieved through less risky methods like increased exercise, improved nutrition, and smoking cessation. Drinking more than moderate amounts can contribute to serious injury and disease.

What are the long-term effects of chronic alcohol abuse?

- Heavy long-term drinking damages the stomach lining, which leads to vomiting, diarrhea, abdominal pain, and internal bleeding. It makes ulcers worse. Decreased appetite can lead to malnutrition.
- Blackouts may occur from the effect of alcohol on the central nervous system. Blackouts are periods when a person is conscious and functioning, but is later unable to recall what he or she did or said.
- Chronic alcohol abuse damages the brain, causing problems with memory, judgment and abstract thinking. If drinking stops, some of these problems can be reversed. Heavy drinking and inadequate nutrition, especially vitamin B1 deficiency, can result in Wernicke's encephalopathy, causing drowsiness, confusion, difficulty walking, and abnormal eye movements. If untreated, Korsakoff's syndrome develops, resulting in a lack of short-term memory, poor coordination and serious disorientation. Many Korsakoff patients make up stories that have no basis in fact. Most require institutionalization.
- Heavy drinking raises blood pressure and interferes with blood clotting, which increases the risk for hemorrhagic stroke. Heavy drinking also damages the heart muscles and causes irregular heartbeat, which can result in sudden death.
- In men, heavy alcohol use can cause impotence, reduced testicle size, loss of body hair and breast growth. In women, it can cause menstrual irregularities and infertility.
- Alcohol use increases the risk of cancer of the mouth and throat. The risk of these cancers is greatly increased if the drinker also smokes. It is also associated with cancer of the liver, pancreas, stomach, large intestine, rectum, and breast.

- Alcohol is especially harmful to the liver. An early symptom of alcohol abuse is the accumulation of fat in the liver. If drinking continues, alcoholic hepatitis (serious liver inflammation) results. These two conditions are reversible if drinking stops. Continued drinking leads to alcoholic cirrhosis, a chronic inflammatory disease in which liver cells are replaced by scar tissue. Cirrhosis is a leading cause of death among chronic alcohol abusers.
- Chronic drinking reduces bone density and defences against infectious diseases such as pneumonia and tuberculosis.
- Chronic alcohol abusers develop tolerance to large amounts of alcohol. This means they must consume increasingly harmful amounts of alcohol to achieve the desired effects. Eventually physical dependence occurs as the body gets used to having alcohol in the system.
- Withdrawal occurs if intake is suddenly stopped. Symptoms may include loss of appetite, nausea, anxiety, sleeplessness, irritability, confusion, sweating and tremors (shakes). Convulsions and hallucinations may occur. Delirium tremens (DTs) is the most severe effect, and is characterized by extreme agitation and disorientation, high body temperature, accelerated heart rate and terrifying hallucinations (seeing or feeling things such as bugs crawling on skin).

What is the difference between problem drinking and alcoholism?

- The two terms are often used to mean the same thing when referring to a person with alcohol-related problems. "Problem" drinking may have less stigma and fewer negative connotations than the word alcoholism. Problem drinking is sometimes used if a person has less advanced problems and can still choose how much to drink. Alcohol dependence can be defined as an ongoing inappropriate use of alcohol, which causes increasingly serious problems in a person's physical or mental health, or work, family, social or spiritual life.

- In general, if alcohol use is negatively affecting any aspect of a person's life, then that person is a problem drinker.

How many alcoholics are there in Alberta?

- An answer to this question is very complex. Any method used to calculate the number of alcoholics is just an estimate.
- One method is to estimate the risk people have of developing problems based on how much they drink. In general, we know that about 5% of adult Canadians drink enough to put them at high risk of becoming dependent on alcohol. Based on 2003 population figures, approximately 152,000 Albertans are at risk of becoming dependent on alcohol.
- More recently, Health Canada assessed alcohol dependence using a set of questions that reflect psychiatric diagnostic criteria (DSM-IV). Based on the results from the Canadian Community Health Survey 2002 (cycle 1.2), an estimated 640,632 (2.6%) Canadians (aged 15 and older) reported a level of alcohol use suggestive of dependence. In Alberta, comparative figures show 3.5% of the population or 85,524 Albertans reporting a level of alcohol use suggestive of dependence.

Is alcohol abuse a disease?

- Defining alcohol abuse as a chronic, progressive disease was an important step in facilitating treatment of alcohol abusers. Rather than being viewed as a moral weakness or personal inadequacy, alcohol abuse could be seen as a treatable condition.
- Looking beyond the disease concept, alcohol abuse can be viewed more broadly as a complex condition with psychological, social and medical aspects.

What are the warning signs of a drinking problem?

- Loss of control: going beyond your limits, drinking more often, gulping drinks, secret drinking.
- Loss of power over your life: problems with friends, family, work, school, finances or legal matters as a result of drinking.
- Emotional problems: anxiety, guilt, or depression over alcohol use.
- Physical symptoms: hangovers, blackouts, and gastrointestinal problems.

Is problem drinking hereditary?

- Many factors contribute to alcohol problems, including the genetic and psychological make-up of the individual as well as cultural and sociological factors.
- Studies have shown that alcoholism runs in families. Children of alcoholics have a greater risk of developing alcohol-related problems. However, these findings do not prove that alcoholism is inherited, since both the environment and genetic factors contribute to the development of alcohol abuse.
- The current thinking is that heredity does play a role in the development of alcohol abuse in some people. But alcohol abuse per se is not thought to be inherited. Rather it is an underlying susceptibility that seems to be inherited. Additional research is needed to determine how, and for which people, heredity affects the development of alcoholism.

Do certain types of people develop alcohol-related problems?

- Anyone who drinks can become alcoholic. It is not possible to reliably predict on the basis of any single factor who will develop alcohol-related problems.

- Studies of adopted children with a birth parent who was alcoholic show that heredity plays a role in the development of alcohol abuse for some people.

Does the type of alcohol consumed affect the chance of developing problems?

- No. The form of alcohol makes no difference. The eventual effect of the pure alcohol contained in all types of alcoholic beverages is the same. The same amount of pure alcohol is found in a 12-ounce (341 ml) bottle of regular beer, 1.5 (43 ml) ounces of distilled spirits or a 5-ounce (142 ml) glass of wine.

What is fetal alcohol spectrum disorder or FASD?

- Fetal alcohol spectrum disorder (FASD) is a general term used by researchers and physicians to refer to the entire range of physical abnormalities and problems in functioning caused by exposure to alcohol in the womb. It is not a diagnosis; it is simply a term to capture the broad range of effects resulting from damage to the fetus when the mother drinks. FASD describes a range of disabilities and acts as the umbrella term for diagnoses such as: fetal alcohol syndrome (FAS), partial FAS (pFAS), Alcohol-related neuro-developmental disorder (ARND), and Alcohol-related birth defects (ARBD).
- Except for the specific diagnosis for FAS, it is almost impossible to conclusively identify FASD because the different physical or behavioural problems related to drinking during pregnancy may also be caused by other factors.

What is fetal alcohol syndrome or FAS?

- FAS should only be diagnosed by a specially trained doctor.
- Infants with FAS are smaller than other newborns and have different facial features such as flat noses and small eyes. They also have some brain damage that usually results in mild to severe mental retardation.

How much alcohol can a pregnant woman safely drink?

No safe limit of alcohol consumption by a pregnant woman has yet been established. Experts recommend that women abstain from alcohol during pregnancy.

Adolescents and alcohol

What is the legal drinking age across Canada?

- In Alberta, Manitoba and Quebec the legal drinking age is 18 years. In all other Canadian provinces and territories, the legal drinking age is 19.

What is the position of the Alberta Alcohol and Drug Abuse Commission (AADAC) concerning the legal drinking age?

- AADAC supports retention of a legal drinking age of 18 in Alberta.
- The concerns around raising the legal drinking age are complex and do not lend themselves to easy resolution by any single measure. Research on the effects of raising the legal drinking age in other jurisdictions has produced mixed and inconclusive results.
- The legal drinking age in Alberta is consistent with the age of majority.

What is the trend in drinking among teens?

- According to a study done in 2002, 56.3% of Alberta students (grades 7 to 12) had consumed alcohol at least once in the previous year.
- In terms of how often teens drink, this same study found that most students used alcohol relatively infrequently (less than once per month). Thirteen per cent (13.0%) reported drinking at levels considered hazardous or harmful.

- As well, the study found that males were more likely than females to report alcohol consumption and to report hazardous or harmful drinking.
- Alcohol use was also found to increase by grade level.

Are there differences in the treatment needs of adolescents and adults?

- Although most teens in Alberta are healthy and do not have problems with alcohol or other drugs, over 4,400 adolescents received treatment services from AADAC during 2003/04 (most on an outpatient basis).
- Like adults, teens face the challenge of developing skills and abilities needed to manage their lives successfully without depending on alcohol or other drugs.
- Teens may not have as long a history of heavy alcohol or drug use as some adults, but, because of their age and developmental stage, they may be especially vulnerable to the harmful consequences of such use. Troubled adolescents require programs and staff that are sensitive to their developmental level and the issues that they are facing. These may include issues of identity, independence and peer group membership. Involvement of family or other supportive adults may also be especially important.
- Specialized treatment services are available in Alberta for teens. Contact your local AADAC office, call the 24-hour toll- free Help Line (1-866-332-2322) or check the website (www.aadac.com).

Impaired driving

What are the drinking and driving laws in Canada?

- In Canada, it is an offence to operate a motor vehicle if a person's ability to do so is impaired by alcohol or other drugs, or if that person has a concentration of alcohol in the blood exceeding the legal limit.
- The legal limit for impaired driving in Canada is .08. A driver is considered legally impaired if there are 80 mg of alcohol per 100 ml of blood in the body. This measurement is called BAC (blood alcohol concentration) and is determined by analyzing breath or blood samples.
- The Government of Canada revised the Criminal Code in 1985 to establish minimum penalties that provinces must apply when someone is convicted of impaired driving. Penalties for impaired driving were increased with the proclamation of Bill C-82 in 1999 and Bill C-18 in 2000. They are
  - first conviction - minimum fine of $600 and prohibition from driving for one to three years
  - second conviction - minimum 14 days in jail and prohibition from driving for two to five years
  - third and later convictions - minimum 90 days in jail and prohibition from driving for three years, with a maximum penalty of a lifetime driving ban
- The provincial government also has established penalties for impaired driving, other than those outlined in the Criminal Code. Under the *Alberta Traffic Safety Act* (1999), impaired drivers face the following sanctions:
  - first conviction – a one-year driver's license suspension
  - second conviction – a three-year driver's license suspension
  - third conviction – a five-year driver's license suspension

- Alberta police forces also have the authority to impose an automatic three-month license suspension on persons charged with impaired driving, and can seize or impound the suspect's vehicle.

What are the penalties for drinking and driving offences that cause bodily harm?

- A maximum of 10 years in prison and up to a 10-year prohibition from driving.

What are the penalties for drinking and driving offences causing death?

- A conviction for impaired driving causing death carries a maximum prison term of 14 years and up to a 10-year prohibition from driving. If criminal negligence is involved, the penalty could be life in prison and a lifetime prohibition from driving.

In Alberta, how many traffic collisions involving injuries are alcohol-related?

- According to Alberta police collision reports, in 2003, 22.3% of all drivers in fatal crashes had consumed alcohol or were impaired.
- In that same year, 4.6% of all Alberta drivers involved in serious injury accidents (non-fatal) had been drinking or were impaired.

In Alberta, how many drinking teenage drivers are involved in casualty collisions?

- Traffic accidents are the leading cause of death among teens. Inexperience, alcohol, and high speeds are all factors that contribute to this result.
- In Alberta in 2003, 13% of drinking drivers involved in casualty collisions were 19 years or younger.

How many impaired driving charges occur each year in Alberta?

- Contrary to popular opinion, adolescents are not more likely to drink and drive. Teens account for about 5% of licensed drivers and about 5% of those charged with impaired driving.
- In 2002, 10,186 Albertans were charged with impaired driving. Over the past decade, Alberta has consistently had one of the highest rates of impaired driving among all provinces and territories.
- As a result of an impaired driving conviction, 6,308 Albertans had their driver's license suspended in 2003/04.

Alcohol consumption and sales

How much do Albertans drink?

- In 2004, 80% of adult Albertans (15 years and older) were current drinkers.

TABLE 1: Per capita consumption of alcohol for Albertans 15 years or older

YEAR	LITRES OF ABSOLUTE ALCOHOL*
1989/90	9.8
1990/91	9.3
1991/92	8.9
1992/93	8.5
1993/94	8.7
1994/95	8.4
1995/96	8.2
1996/97	8.1
1997/98	8.5
1998/99	8.7
1999/2000	8.6
2000/01	8.6
2001/02	9.0
2002/03	8.6

* The term absolute alcohol refers to pure alcohol, which is not changed by the amount of water or other additives found in different alcoholic beverages in Alberta.

- Per capita consumption of alcohol for Albertans 15 years or older decreased from 9.8 litres of absolute alcohol in 1989/90 to 8.6 litres of absolute alcohol-the equivalent of 506 bottles of beer-in 2002/03. Albertans tend to drink more than the national average, which was 7.8 litres per capita in 2002/03.
- This figure is based on population data and alcohol sales volume from all Albertans aged 15 years or older. Some people drink less or not at all, while others drink more.

How much do Albertans spend on alcohol?

- In 2003/04, net revenue to the Alberta government from alcohol sales amounted to $559 million.

How much alcohol is sold each year in Alberta?

- In 2002/03, over 275 million litres of beer, wine and spirits were sold in Alberta, most of which (223 million litres) was beer.

The family and problem drinking

What is the impact of living in a family with an alcohol-dependent person?

- While research has pointed out some negative effects often experienced by individual family members as well as by the family unit as a whole, it is important to realize that these vary from person to person and family to family. It's also important to note that negative effects are not necessarily permanent.
- Researchers caution against generalizing about the negative effects of living with an alcohol-dependent person for several reasons. First, it is uncertain whether various problems seen in children of alcoholics remain through to adulthood. Second, few differences have been identified between the effects of living in a family with an alcoholic and those of living in a family with a parent who has another type of problem, such as mental illness. Finally, it is generally found that the negative effects of living with an alcoholic may be offset by protective influences in the family environment, or can diminish after the alcoholic goes into recovery.

How does alcohol abuse affect the family?

- Over time, families tend to develop certain ways of communicating and coping with the alcohol-dependent family member. While these coping strategies may help the family to operate more smoothly and get along better, they may also let the alcohol dependence continue. Ironically, substance abuse can also become a way of coping with the stress and problems alcohol abuse has created in the family.

How does alcohol abuse affect the children?

- Alcohol abuse by parents often creates an unstable family environment. Family members are often not very close and do not provide emotional support for each other. As well, parents may not effectively discipline their children or provide them with training in basic life skills.
- Younger children and teens who grow up with an alcoholic parent may be more likely to show antisocial behaviour and have problems such as delinquency, skipping school, aggressiveness, hyperactivity, and temper tantrums.
- Adult children of alcoholics may be at higher risk for mental health and behavioural problems including depression, substance abuse, poor self-esteem and anxiety.

How does alcohol abuse affect the spouse?

- Spouses of alcoholics tend to try many different coping strategies as the drinking problems progress and often gradually withdraw after repeated attempts to stop their spouse from drinking. The alcoholic and spouse may show little affection for each other, communicate by arguing, and have difficulty resolving problems together.

Should family members seek help?

- Because there is a wide range of individual and family reactions to living with an alcoholic person, it is very important to consider each individual's unique situation and to treat the alcohol problems within a family context.
- Outside help from someone trained to deal with alcohol abuse is recommended so that family members can learn to interact with each other in healthy ways. Once family members begin relating to each other on the basis of inappropriate roles based on drinking behaviour, it is difficult to change the situation from inside the family system.

What help is available for the family members affected by alcohol abuse?

- Help is available through a number of agencies and organizations, including Al-Anon, Alateen and AADAC.
- Al-Anon is a self-help group of family and friends of problem drinkers who have joined together to support and share with each other their experiences in an attempt to gain a better understanding of alcohol-related problems.
- Alateen is a group similar to Al-Anon, but is for young people aged 12 to 20.
- Alcoholics Anonymous, a program that is available for the problem drinker, is discussed under the Treatment section of *Quick Facts*.
- AADAC provides counselling services to families and friends of problem drinkers who are trying to gain an understanding of the process of addiction, their role in it and how to overcome its effects.

Is legal protection available to the family of a problem drinker?

- The Criminal Code of Canada provides protection to persons who are being physically abused. Protective provisions under this code include assault charges and peace bonds.
- A person charged with assault must appear in court to plead guilty or not guilty. Depending on the plea, the case may go to trial and a fine or jail term may be imposed as a sentence.
- A peace bond is a promise to the court by the abuser to maintain good behaviour. The execution of a peace bond requires both partners to appear in court where a judge decides whether a peace bond should be ordered.

- The Alberta Protection Against Family Violence Act (1998) contains provisions for court-ordered emergency protection for family members who have experienced violence.
  - The Act allows for immediate protection of the claimant-spouse; child; other persons related by blood, marriage or adoption and living in the same household; government ward in care-without notice to the respondent (family member against whom the order is sought or granted).
  - The court order can include provisions for (1) restraint preventing the respondent from contacting or communicating with the claimant; (2) granting the claimant and other family members exclusive occupation of the residence for a specified period of time; (3) a peace officer to remove the respondent and his or her belongings from the residence; (4) the seizure and storage of any weapons that have been used to threaten or commit family violence; and (5) any other conditions deemed necessary by the judge or designated justice of the peace.

Social costs of substance abuse

How many deaths are related to substance abuse?

- Substance-related deaths tend to be under-reported. The primary cause of death may be listed as something other than alcohol, tobacco or illicit drugs (i.e., illegal drugs such as marijuana, LSD, cocaine, heroin) while any of these substances, as a secondary or contributing cause may not be recorded.
- In Alberta, as in the rest of Canada, motor vehicle accidents are the leading cause of alcohol-related mortality. Lung cancer, followed by chronic obstructive pulmonary disease and heart disease, contribute the most to tobacco-related mortality. The majority of illicit drug deaths result from suicide and drug poisoning.
- In 2002, 11.7% of deaths investigated by the Alberta Medical Examiner listed alcohol and/or other drugs as a contributing factor or the underlying cause.

What types of costs are associated with workplace substance abuse and problem gambling?

- According to an AADAC study conducted in 2002, the estimated cost to employers of workplace substance abuse and problem gambling is $74 million per year. The most significant costs identified by employers were lost productivity from absenteeism or work slowdowns.
- In 2002, over 184,000 (11%) Alberta employees reported using alcohol at work. Alcohol problems in the work force result in lower productivity, absenteeism, accidents at work, and lower work morale.

How many hospitalizations are related to substance abuse?

- The exact prevalence of substance-related problems among hospitalized patients is difficult to establish, and is underestimated in most studies. Prevalence rates will vary among hospitals and across wards within hospitals.
- In 1995/96, hospital separations (all people who leave hospital, alive or dead) for alcohol, tobacco and illicit drug use totalled 279,815 in Canada. The majority of separations (191,922) were for tobacco-related illnesses.
- In 2001/02, there were 3,347 separations from active care and psychiatric hospitals in Alberta for alcohol and drug-related disorders.

How does substance abuse affect legal costs and crime?

- It is widely believed among police officials that a large proportion of crime is associated with the use of alcohol and other drugs. For crimes such as impaired driving, violation of provincial liquor regulations, and the possession, importation and trafficking of illicit drugs, there is a clear link to substance use. For other criminal behaviours (e.g., theft, assault, homicide) the role that alcohol or drug abuse plays is more difficult to determine.
- A recent study estimated that between 40 and 50 per cent of crimes committed by federal and provincial inmates in Canada can be attributed to substance abuse. According to this research, 54% of federal offenders were under the influence of alcohol or other drugs while committing their crimes, and 38% of inmates were assessed as dependent on alcohol, drugs or both.

- Since the early 1990s the overall crime rate has been declining in Canada, with the exception of drug-related offences. Between 1992 and 2002, police reported drug offences had increased 42%. However, in 2003, the rate of drug offences decreased 8%. Drug offence rates in Alberta (238 per 100,000 population) are among the lowest of the provinces and territories.
- Rates for drug-related offences are highest for individuals between the ages of 18 and 24 followed by 12-to-17 year olds.
- A substantial proportion of family violence is perpetrated in the absence of substance use. The majority of persons who assault their partners do not have a drinking or drug problem. At the same time, Canadian justice statistics show that periodic heavy drinking is associated with elevated rates of spousal violence. Specifically, rates of spousal violence were found to be three times higher for people whose partners drank heavily when compared to those whose partners drank moderately or not at all.
- Canadian justice statistics also show that women (44%) are more likely to report that their partners had been drinking at the time of a violent incident than are men (26%) who have been victims of spousal violence. Police do not always record substance use when investigating incidents of family violence. When substance use was recorded by Alberta police in 2003, 48% of all incidents of family violence involved alcohol, and in about one-quarter of the cases (24%) both parties were drinking.
- Some research has found a higher level of alcohol and drug use among victims of violence compared to the general population. For example, a 1994 national survey of 12,300 Canadian women found that over 25% of ever-married women who lived with violence reported using alcohol, drugs or medication to help them cope with their situation.

- A study of University of Alberta students indicated drug or alcohol involvement in almost half of reported unwanted sexual experiences in 1992. In 44% of the reported cases, the perpetrator had consumed alcohol and/or drugs. A similar percentage (40%) of cases showed that the victim had consumed alcohol and/or drugs. A similar study in 2000 revealed an increase in reports of unwanted sexual experiences involving alcohol and/or drugs with 54.2% of survivors and 54.5% perpetrators under the influence of some form of intoxicant.
- In 2001, there were 69,582 alcohol and drug-related offences reported in Alberta. The majority were for non-sexual assault (40%), 25% were for disturbing the peace and 20% were for impaired driving. Overall, 10% were drug-related offences.
- In Canada in 2001/02, drug offences represented 9% of all adult criminal court cases (5% for possession and 4% for trafficking) and 7% of cases processed in youth courts (5% for possession and 2% for trafficking).

What other costs are associated with substance abuse and problem gambling?

- Other social and economic costs associated with substance abuse arise for individuals and the communities in which they live. For example, substance use is a factor in many cases of suicide, long-term illness, property damage and injury.
- In 2002, 15.8% of the suicides in Alberta were related to the use of alcohol or other drugs.
- The Alberta Medical Examiner also records information about gambling if a relative or friend mentions it, or if there is evidence of gambling at the scene of death. In 2003, approximately 1% of suicides in Alberta were gambling-related.

- Since 1979 when reporting began, 8.8% of diagnosed AIDS cases in Alberta are attributable to exposure via injection drug use. In Alberta in 2003, 22% of all positive HIV tests listed injection drug use as the primary risk factor.
- Injection drug use is also the primary risk factor for Hepatitis C. Estimates indicate that there are 6,500 new Hepatitis C infections in Canada each year, of which an estimated 60-90 per cent are due to injection drug use. In Alberta, current estimates suggest that about 75% of injection drug users are infected with Hepatitis C.
- Alcohol use during pregnancy can result in fetal alcohol spectrum disorder (FASD), which has significant implications in terms of physical and social functioning. A comprehensive study of the incidence of FASD has yet to be completed in Canada, but the rate is estimated at 9 in 1,000 births with higher rates among Aboriginal populations.

Cannabis

- Cannabis is a mood-altering drug that comes from the Cannabis sativa plant.
- Cannabis is the general term used to describe marijuana, hashish and hashish oil.
- The cannabis "high" comes from the chemical THC (delta-9-tetrahydrocannabinol).

What are the short-term effects of cannabis use?

- The three major areas of functioning that are affected by cannabis use are the central nervous system, the cardiovascular system and psychological functioning.
- Effects on the nervous system include impairment of intellectual functioning, short-term memory and learning ability.
- Physical coordination and the performance of complex visual tasks also become impaired. In amounts commonly used, cannabis can impair a person's ability to engage in activities such as driving a car, operating machinery or flying a plane. When cannabis is used together with other drugs like alcohol, greater impairment occurs.
- Effects on the cardiovascular system include increased heart rate and changes in blood pressure.
- Effects on psychological functioning include feelings that range from well-being and exhilaration to anxiety and fear. In some cases, panic and disorientation may occur.

What are the long-term effects of cannabis use?

- Long-term effects of cannabis use are still under investigation. Dangerous effects seem to be associated mostly with heavy, chronic use.
- Smoking cannabis damages the lungs and contributes to respiratory problems like chronic coughing and lung infections.
- Heavy marijuana smokers have lung damage similar to the kind that precedes the development of lung cancer in tobacco smokers.
- Current research suggests that when both tobacco and marijuana are smoked, there is a greater potential to produce cancer than with either substance alone.
- Regular heavy users of cannabis develop tolerance (that is, a need for more drug to produce the same effect).
- Heavy, long-term use of cannabis can cause dependence.
- Withdrawal occurs when heavy use is abruptly stopped. Users may experience withdrawal symptoms, which include irritability, sweating, tremor, upset stomach and diarrhea.
- Effects of chronic, heavy use may include decreased motivation and interest, as well as difficulties with memory and concentration.
- Women who use cannabis regularly during pregnancy have increased risk for premature delivery and low-birth-weight infants.
- Children exposed to cannabis prenatally may have mild withdrawal symptoms at birth, and subtle behaviour and learning problems as they get older.

How many people use cannabis?

- Cannabis is the most popular illicit drug used in Canada and in Alberta. The rate of cannabis use has remained relatively stable through the mid 1990s, but recent surveys show that use has increased since then, especially among youth and young adults.
- In 2004, 15% of Albertans (aged 15 or older) reported using cannabis one or more times in the previous 12 months, and 3% were frequent users (one or more times per week).
- Among Alberta students (grades 7 to 12) surveyed in 2002, 27.6% reported using cannabis one or more times in the previous 12 months.

What is the law in Canada concerning cannabis?

- Under Canada's Controlled Drugs and Substances Act, possession, production, trafficking, importing and exporting of cannabis can result in fines and/or prison sentences up to life imprisonment. Conviction results in a criminal record.

How many drug offences are cannabis-related?

- In 2003, there were a total of 85,953 drug offences in Canada; 71% were cannabis-related offences.
- In 2002, there were 7,496 drug offences recorded in Alberta, and 64% were cannabis-related.
- In 2003, Canadian police forces seized 32,710 kg of marijuana (excluding plants), hash, and hash oil. The RCMP estimate that approximately 1.4 million marijuana plants were seized by police departments across the country.

How does AADAC view cannabis?

- AADAC recognizes that the use of illicit substances (including cannabis) adversely affects the health and well-being of many Albertans.
- AADAC supports all reasonable efforts to discourage the consumption of these substances, including actions to minimize the harmful consequences to individuals and society, provided these efforts do not create more serious problems than the actual use of the drugs.

Tobacco

What is in a cigarette?

- The smoke produced when tobacco is burned contains over 4,000 different chemicals, 50 of which are cancer-producing agents called carcinogens.
- Carbon monoxide absorbed from smoking a single cigarette stays in the bloodstream for up to six hours. This forces the heart to work harder trying to supply the body with enough oxygen.
- Nicotine is one of the principal ingredients in tobacco and is classified as a drug. It is a stimulant that causes the heartbeat and blood pressure to increase. Nicotine is a highly addictive drug; withdrawal symptoms are a major reason it is so difficult to quit smoking.
- Tar consists of solid particles from cigarette smoke. It interferes with the normal exchange of oxygen and carbon dioxide in the lungs, and contributes to shortness of breath. Continued exposure to tar increases the risk of developing lung cancer.
- Light cigarettes deliver as much tar, nicotine and carbon monoxide as regular cigarettes, much more than manufacturers claim. Recent evidence reveals that there is no difference in the risk of heart disease from smoking light or regular cigarettes.
- Clove cigarettes, containing 30% to 40% cloves and 60% to 70% tobacco, contain almost twice the tar and nicotine of ordinary cigarettes. They can cause allergic and toxic reactions, lung congestion, asthma and chest pain.
- Smokeless cigarettes contain nicotine and tobacco flavouring, but the user puffs on them without lighting them. Little is yet known about potential negative effects of this product.

What are the short-term effects of smoking tobacco?

- Smoking tobacco produces feelings of pleasure, stimulation and relaxation. It causes increased heartbeat, blood pressure and blood sugar.
- New users can experience dry, irritated throat, coughing and dizziness.
- Inhaled smoke irritates the air tubes and air sacs in the lungs. Harmful chemicals enter the bloodstream through the lungs.

What are the long-term effects of smoking tobacco?

- Long-term effects of tobacco use include heart disease, strokes, emphysema, chronic bronchitis, and aneurysms.
- Smoking causes cancers of the lung, throat, stomach, bladder, kidney and pancreas. It is estimated that more than 30% of all cancer, and 85% of lung cancer results from cigarette smoking.
- Nicotine is a highly addictive drug. Heavy smokers have great difficulty stopping use. Withdrawal symptoms include irritability, craving, thinking and attention problems, sleep disturbance and increased appetite. Research suggests there is a strong association between age of onset of smoking and nicotine dependence. Individuals who begin smoking when they are teens, especially very young teens, tend to be more dependent than persons who start smoking after age 20.

What are the fetal effects of smoking tobacco?

- Newborn babies of mothers who smoked while pregnant often have low birth weight, are shorter in length, and have a small head circumference. Some studies link smoking during pregnancy with miscarriage and stillbirths. Some research also suggests that smoking during pregnancy can lead to the child having learning and behaviour problems.

What is environmental tobacco smoke (second-hand smoke)?

- Environmental tobacco smoke is tobacco smoke in the air, composed of mainstream smoke (smoke exhaled by the smoker) and sidestream smoke.
- Sidestream smoke is smoke released into the air by a burning cigarette or other tobacco product. Sidestream smoke accounts for 85% of tobacco smoke in the environment.

What is passive or involuntary smoking?

- Passive or involuntary smoking occurs when non-smokers are exposed to environmental tobacco smoke.

What are the risks associated with passive smoking?

- Passive smoking increases the risk of developing lung cancer and heart disease in non-smokers.
- Compared with the general population, non-smoking spouses of smokers have two to three times the risk of developing lung cancer.
- About 350 non-smokers in Canada die each year from lung cancer caused by exposure to environmental tobacco smoke
- Children whose parents (particularly their mothers) smoke are more likely to have bronchitis, pneumonia, ear infections, and asthma attacks than children of non-smoking parents. Their risk of dying from sudden infant death syndrome (SIDS) is also increased.
- Exposure to environmental tobacco smoke has been linked to low birth weight, which is linked to increased risk of respiratory illness.

How many deaths are related to smoking tobacco?

- Tobacco use is considered the single most significant cause of preventable morbidity (disease) and mortality (death) in Canada and in most other developed countries.
- An estimated 18,347 Canadians died from tobacco-related cancers in 1998.
- An estimated 10,618 Canadians died from tobacco-related respiratory diseases in 1998.
- An estimated 17,413 Canadians died from tobacco-related cardiovascular diseases in 1998.

What is the Alberta smoking rate, aged 15 and older?

- In 2001, 25% of Albertans aged 15 and older smoked. In 2003, 20% reported smoking. This overall 5% decrease in the number of Albertans who smoke is equivalent to approximately 100,000 fewer smokers.
- In 2001, 24% of youth aged 15 to 19 smoked. In 2003, the rate dropped to 18%, a 6% overall reduction in smoking among this age group since 2001.
- In 2001, 34% of young adults aged 20 to 24 smoked. In 2003, the rate dropped to 31%, a 3% overall reduction in the smoking rate in this age group since 2001.

Cocaine

What is cocaine?

- Cocaine is a powerful central nervous system stimulant. It is prepared from the leaves of the Erythroxylum coca bush found primarily in South America. After coca paste is extracted from the leaves, it is purified to produce an odourless, white crystalline powder called cocaine hydrochloride. Often the white crystalline powder is diluted with sugar, cornstarch, talcum powder, etc.

How is cocaine used?

- Cocaine is often sniffed or snorted through the nostrils, where it is absorbed through the mucous membrane of the upper respiratory tract.
- Other methods of use include smoking or injecting.

What are freebase and crack cocaine?

- Freebase cocaine is cocaine that has been chemically treated, through an extraction process using flammable solvents, to remove the hydrochloride portion of the cocaine. The resulting freebase vaporizes more readily than regular cocaine and can therefore be smoked.
- Crack is a freebase form of smokable cocaine. It is made by adding baking soda to cocaine and heating the mixture. The dried residue forms clumps known as crack or rock, which are then smoked.

What are the short-term effects of cocaine use?

- Short-term effects of cocaine use include increased alertness and high energy, euphoria followed by agitation and anxiety, decreased appetite, exaggerated reflexes and pupil dilation.
- Additional effects include increased blood pressure, rapid heartbeat and breathing, sweating and pallor.
- At higher doses, users may experience rapid, weak pulse, shallow breathing, erratic or violent behaviour, tremors, twitching, hallucinations, chest pain or pressure, blurred vision, fever, nausea and vomiting, muscle spasms, convulsions and death. Heart attacks, seizures, headaches, and strokes can also result from cocaine use.

What are the long-term effects of cocaine use?

- Chronic cocaine use may lead to agitation, excitability, depression, mood swings, and hypersensitivity to sensory stimuli, sometimes resulting in hallucinations. Other effects include sleep disorders, eating disorders and sexual dysfunction.
- If used during pregnancy, cocaine can cause complications such as spontaneous abortions. Heavy use during pregnancy is associated with reduced fetal weight, and an increased stillbirth and malformation rate.
- Users who inhale cocaine may destroy tissue in the nose. Those who smoke it can develop respiratory problems. Individuals who inject cocaine, especially those who share injecting equipment, are at risk for bacterial and viral infections including hepatitis and HIV (the virus that causes AIDS).
- Chronic, heavy cocaine use can cause severe psychiatric disorders such as paranoid psychosis. At first, users feel good (euphoria). With continued use, they can begin to feel increasingly uncomfortable (dysphoria), and finally become very suspicious and lose contact with reality (paranoid psychosis).

Is crack more dangerous than cocaine?

- When smoked, crack reaches the brain very rapidly. The sharp rise in cocaine blood levels from crack can put the user at increasingly greater risk for acute toxic overdose reactions including seizures, high blood pressure, heart attack and stroke.

Are cocaine and crack addicting?

- Studies indicate that cocaine is physically and psychologically addicting. The craving for the drug experienced by regular users is thought to be due to physiological changes in brain chemistry brought on by the drug. This craving makes it very difficult for users to stop using cocaine.
- When crack is smoked, it reaches the brain very rapidly and produces a dramatic but short-lasting euphoria, followed by an extreme low ("crash"). This sequence favours repeated use of the drug, which can quite quickly result in addiction. Another difference from regular cocaine is that crack is sold in smaller, less expensive amounts, so it is available to more users.

How many people use cocaine?

- Findings from Canadian Addiction Survey (2004) indicated that 10.6% of Canadians (15 years and older) had used cocaine or crack at least once in their lives, and 1.9% were current users (used one or more times during the previous year).
- The same survey reported that use of cocaine/crack was higher in Alberta: of those 15 years or older, 2.4% were current users.
- In 2002, 2.9% of Alberta students (grades 7 to 12) reported using cocaine in the past year and 2.8% said they had used crack.

How many drug offences are cocaine-related?

- In 2003, there were 13,938 cocaine-related drug offences in Canada. This represents 16% of total drug-related offences for that year.
- In 2002, 1,812 drug offences in Alberta were cocaine-related, representing 24% of all drug-related offences in the province.
- In 2003, Canadian police forces seized 1,229 kg of cocaine.

Caffeine

What is caffeine?

- In its pure form, caffeine is a white, crystalline powder. It is found in coffee beans, tea leaves, cocoa leaves and kola nuts. It is one of the most widely used drugs in the world.

How much caffeine do various products contain?

- Depending on the strength, a cup of percolated or brewed coffee contains between 40 and 180 mg of caffeine. Instant coffee ranges from 30 to 100 mg of caffeine per cup.
- Speciality coffee shops may serve coffee containing twice as much caffeine as the usual range.
- Again depending on strength, a cup of tea contains between 10 and 90 mg of caffeine.
- Most cola drinks contain 30 to 40 mg (per 10-ounce can) of caffeine.
- A typical chocolate bar contains 20 to 25 mg of caffeine.
- Coffee-flavoured ice cream or yoghurt contains as little as 5 mg and as much as 100 mg of caffeine per serving.
- Stay-awake pills contain 100 to 250 mg of caffeine.
- The amount in headache and cold medicines varies; the amount is indicated on the product label.
- Over-the-counter medications containing caffeine include: Anacin®, Instantine®, Tylenol #1®, Excedrin®, 222s®, Atasol-8®, Dristan®.

What are the short-term effects of caffeine use?

- Caffeine is a stimulant. Short-term effects include mild mood elevation, increased sensory awareness and alertness, and postponement of drowsiness.
- Other effects include increased blood pressure, metabolic rate, urination, and body temperature; shortened sleep; decreased appetite; constriction of cerebral blood vessels; and stimulation of cardiac muscles and respiration.

How much caffeine is too much?

- Daily use in low doses of up to 300 mg (about three to four cups of coffee) in otherwise healthy adults does not appear to produce negative effects.
- High doses of 600 mg or more (the equivalent of six to eight cups of coffee) can produce chronic insomnia, anxiety, depression, gastrointestinal irritation and rapid irregular heartbeat. Some people experience these unpleasant effects at lower doses.
- Caffeine has been shown to affect the body's calcium balance, reducing bone density and increasing the risk of osteoporosis.
- Although caffeine has not been proven to cause birth defects, pregnant women are advised to consume as little as possible. A growing body of evidence suggests caffeine can make it harder for women to get pregnant, increases the risk of miscarriage, and slows fetal growth.

Solvents/Inhalants

What types of products contain solvents or inhalants that are abused?

- Many industrial, commercial and household products contain solvents that are commonly abused. They include gasoline, some types of glue and household cements, cleaning and lighter fluid, nail polish remover, paint, lacquer and varnish thinner, and some household cleaners.

What are the short-term effects of solvent or inhalant use?

- Early effects may include euphoria, dizziness, numbness, and weightlessness, followed by decreased motor coordination, muscle weakness, slowed reflexes, impaired judgement, visual disturbances and ringing in the ears. Bizarre behaviour, perceptual distortions and severe depression may occur.
- Other effects include increased heart rate, irregular heartbeat, headache, sneezing, coughing, nasal inflammation, respiratory depression, nausea, vomiting and diarrhea.
- A prolonged period of inhalation can result in coma or seizures. Reduced oxygen supply to the brain can cause unconsciousness and brain damage.

What are the long-term effects of solvent or inhalant use?

- Many chronic solvent users have experienced psychological problems including apathy, mood swings, depression and paranoid thinking. There is increasing evidence that brain damage occurs with continued heavy use.
- Other effects may include blood abnormalities and damage to the liver, kidneys, lungs, and heart.

- Children born to women who abuse inhalants may have growth and development problems.

Can solvent or inhalant use be fatal?

- One cause of death among solvent users is "sudden sniffing death." Death results from heart failure brought about by a severely irregular heartbeat, usually associated with some stress or vigorous activity after inhaling the solvent.
- A plastic bag is often used to inhale the substance. If a user lapses into sleep or unconsciousness while a bag remains over the nose and mouth, there is a substantial risk of death from suffocation.
- Accidental or intentional overdose of solvents has resulted in a number of deaths.

Who uses solvents or inhalants?

- In Canada, solvent abuse occurs all across the country, in various ethnic and socio-economic groups, and in both urban and rural areas. Most commonly, users are young, between the ages of eight and 16, although some heavy users are older.
- In 2004, about 1% of Canadians and less than 2% of Albertans (15 or older) reported ever using solvents or inhalants.
- A 2002 survey of Alberta students (grades 7 to 12) found that 5.6% used inhalants in the previous 12 months.
- Most young people who use solvents do so only on an occasional or experimental basis. Heavy users are often socially disadvantaged, do poorly in school, and come from unstable home environments.

What is methyl alcohol?

- Methyl alcohol (methyl hydrate, wood alcohol) is used chiefly as an industrial solvent. Common household products that contain methyl alcohol include paint removers, antifreeze and liquid fuel.
- Drinking an ounce or less of methyl alcohol can cause blindness, nerve damage, coma, convulsions and death from respiratory arrest.
- Methyl alcohol is a very dangerous poison and cannot be made safe to drink. Some people may try to get high using products that contain this poisonous substance. However, they are poisoning themselves without getting the high they seek.

Other drugs

What are amphetamines?

- Amphetamines are a group of drugs that stimulate the central nervous system. These drugs produce short-term effects such as feelings of well-being, increased alertness and energy, and increases in heart rate and breathing rate. They can also cause shakiness, sweating, anxiety, headache, blurred vision, dizziness, irregular heartbeat and chest pain. Some users experience feelings of power and superiority. Some become hostile and aggressive.
- Overdose can cause delusions, hallucinations, high fever, delirium, seizures, coma, stroke, heart failure and death. Use with alcohol and other drugs is especially dangerous.
- Long-term effects may include sleep disturbances, anxiety, appetite suppression and high blood pressure. Some users become paranoid and violent.
- Chronic use results in physical dependence and withdrawal symptoms when the drug is stopped. Psychological dependence can occur even among regular low-dose users.
- In 2004, 6.1% of Albertans 15 or older reported the use of speed (amphetamines) in their lifetime.
- Methamphetamine is a derivative of amphetamine that was first synthesized in Japan in 1919. It can be ingested the same way as amphetamine: orally, by snorting or by intravenous injection. Methamphetamine for smoking is re-crystalized to form large crystals known as "ice" or "crystal meth."
- Among Alberta students (grades 7 to 12) surveyed in 2002, 5.3% reported using club drugs (ecstasy or crystal meth) in the past year.

What are tranquillizers?

- Tranquillizers are depressant drugs that slow down the central nervous system. They affect the body in a way that is similar to the effects of other depressants such as alcohol, solvents and barbiturates.
  - Some common examples of tranquillizers used to relieve anxiety are: Valium® (diazepam), Librium®, Ativan® and Xanax®.
- Effects of tranquillizers vary with the particular drug, the dose and how it is taken. Small doses produce a feeling of well-being and calm, loss of inhibition, relaxed muscle tension, reduced mental alertness and mildly impaired coordination and balance. Larger doses will probably cause people to appear intoxicated and to become drowsy and fall asleep. Driving motor vehicles and operating machinery should be avoided when taking tranquillizers. Long-term effects include irritability, nausea, headache, skin rash, weight gain, impaired thinking, memory and judgment.
- Tolerance develops with regular use, making increased doses necessary to produce the desired effect. Psychological and physical dependence can also occur. Withdrawal symptoms include sleeplessness, sweating, stomach cramps, agitation, tremors, delirium, convulsions and even death.

What are barbiturates?

- Barbiturates are a group of central nervous system depressant drugs prescribed for sleeping and anxiety problems. Low doses of these drugs produce relaxation and mildly impaired cognitive and motor functioning. At high doses, effects range from severe impairment and intoxication to anaesthesia, unconsciousness and respiratory arrest.
- Examples include Nembutal® and Pentothal®.

- When abused, barbiturates are highly dangerous. Tolerance occurs rapidly, so higher doses are needed to maintain desired effects. Higher doses can lead death from overdose. A user who stops using the drug suddenly can experience severe withdrawal symptoms.

What are steroids?

- Anabolic steroids are a group of drugs similar to the male hormone testosterone.
- Short-term effects of anabolic steroid use include increased muscle bulk and strength, and masculinization of both sexes. Women who use steroids can experience increased body and facial hair and menstrual irregularity. Men can experience testicular shrinking and impotence. Adolescents using anabolic steroids may have their growth prematurely and permanently stunted.
- Steroids are most often used by athletes wanting to improve their performance, especially in sports requiring strength and power. Increasingly, they are also used by adolescents and young adults, especially males, who want to improve their physical appearance.
- A 2002 school survey of Alberta students (grades 7 to 12) showed that 1.2% had used steroids in the previous 12 months.

What is ecstasy (MDMA)?

- Ecstasy is a drug that is structurally related to amphetamines or stimulants, but also has some hallucinogenic properties. Its chemical name is 3,4-methylenedioxymethamphetamine or, in short form, MDMA. It is known as a designer drug produced in underground laboratories.

- Ecstasy can produce mild intoxication, a sense of pleasure, and euphoria. As with stimulant use, users may feel full of energy and confidence. As well, ecstasy may cause sweating, increased blood pressure and heart rate, nausea, grinding of the teeth and jaw pain, anxiety attacks, blurred vision, and vomiting. Strong negative effects may last for days or weeks from relatively small doses. These include depression, confusion, panic, insomnia, and convulsions.
- Use of ecstasy has been associated with raves, dance parties typically held in abandoned warehouses or outdoor locations that can hold large numbers of people. There have been some deaths associated with ecstasy use at raves. The combination of exertion from dancing, heat, heavy sweating, and lowered fluid intake, has resulted in dehydration and subsequent death.
- In 2003, Canadian police seized more than 5,000,000 dosage units of ecstasy compared to 10, 000 in 1997 and 1.7 million in 2002.
- Among Canadians 15 and older, 4.1% reported using ecstasy at least once in their life. In Alberta, lifetime prevalence of use was 5.1%.

What are hallucinogens?

- Hallucinogens are drugs that affect a person's perceptions, sensations, thinking, self-awareness, and emotions.
- Lysergic acid diethylamide (LSD) is the most powerful of the known hallucinogens. Even in very small doses, its effects include changes in perception, mood and thought. Hallucinations and perceptions of the senses can meld together. Users may experience a sense of wonder and joy, or they may feel anxious and fearful. In some cases, psychotic episodes can occur. These are characterized by bizarre behaviour, delusions, terror and hallucinations.

- Tolerance to LSD develops quickly, so that with consecutive daily doses, no amount of the drug can produce desired effects. Only after a period of abstinence of three to four days does sensitivity return. Physical dependence on LSD does not appear to occur. Some users may become psychologically dependent.
- In 2004, 12.3% of Albertans (15 or older) surveyed reported using hallucinogens at least once during their lives.
- Among Alberta students (grades 7 to 12), 3.9% reported using hallucinogens in 2002.

What is heroin?

- Heroin is a depressant drug produced by chemically modifying morphine, which comes from the opium poppy. It is classified as an opioid or narcotic analgesic.
- Heroin can be sniffed, smoked or swallowed, but is often injected intravenously.
- The effects of heroin use include euphoria, tranquillity, numbness and pain relief. These are often accompanied by decreased physical activity, inability to concentrate, apathy, droopy eyelids and reduced vision.
- Serious negative consequences are often related to the lifestyle of the user and factors relating to intravenous drug administration. For example, users who can't afford their addiction may turn to crime (e.g., drug offences, theft). Other lifestyle factors include poor housing, malnutrition, untreated illnesses, and frequent use of other drugs, all of which result in a generally poor state of health and lowered resistance to infection.
- Heroin users commonly develop bacterial infections and collapsed veins as a result of repeated injections. The combination of lowered resistance and injection drug use increases the risk of contracting hepatitis, HIV and other infections (e.g., pneumonia, tuberculosis).

- Overdose is a common cause of death among heroin users. In the past few years, overdose deaths from heroin have increased in some Canadian cities (especially Vancouver) as a result of the lower cost of heroin and the high purity level of the drug (sometimes in excess of 90% purity on the streets).
- Tolerance develops rapidly, as do both physical and psychological dependence.
- A 2002 survey of Alberta students (grades 7 to 12) showed that 1.4% had used heroin or opium in the previous 12 months.

How many drug offences are heroin-related?

- In 2003, there were 633 heroin-related drug offences in Canada. This represents less than 1% of total drug-related offences for that year.
- There were a total of six heroin-related drug offences recorded in Alberta in 2003, representing less than 1% of all drug offences in the province.
- In 2003, Canadian police forces seized 35 kg of heroin.

What is methadone?

- Methadone is a synthetic narcotic analgesic and is currently used in the treatment of people dependent on other narcotic analgesics such as heroin.
- Methadone is a long-acting painkiller and its effects, risks and tolerance are similar to heroin.
- AADAC operates an Opioid Dependency Program, assisting individuals addicted to opioid drugs to establish a "normal" lifestyle through the use of methadone maintenance and withdrawal.
- In 2003-04, AADAC served more than 800 clients in the Opioid Dependency Program.

Problem gambling

What is problem gambling?

- Problem gambling refers to any form of gambling behaviour that adversely affects family, personal, or vocational pursuits. It includes gambling that causes occasional problems as well as gambling that results in ongoing serious consequences. It may have a number of negative impacts on players, their families and friends, and the communities they live in.
- Problem gambling is a recognized psychiatric disorder characterized by (1) continuous or periodic loss of control over gambling behaviour, (2) preoccupation with gambling and with obtaining money to gamble, (3) irrational thinking, and (4) continuation of gambling behaviour despite negative consequences.
- Problem gamblers can experience decreased initiative, interests narrowed to gambling, and reduced feelings of self-worth. Common emotional reactions include depression, outbursts of rage, and feelings of being out of control. Problem gamblers can experience loneliness and alienation from family and friends. Physical consequences include stress-related conditions such as insomnia, digestive problems, and back or neck pain. Problem gamblers also experience withdrawal symptoms such as disorientation and short attention span. Some experience shaking, nausea and vomiting due to stress.
- The effects of problem gambling on the family are interpersonal conflict, instability, separation or divorce, and disregard for the safety and care of children. The problem gambler may neglect responsibilities at home, work, or school.
- For communities, problems related to gambling can include criminal activity and lost productivity in the workplace.

What are the warning signs of a gambling problem?

- Gambling problems can range from minor to severe. Here are some signs that a person may have a gambling problem:
  - *Spends large amount of time gambling.* This allows little time for family, friends or other interests.
  - *Begins to place larger, more frequent bets.* Larger bets are necessary to get the same level of excitement.
  - *Has growing debts.* The problem gambler is secretive or defensive about money, and may borrow from family members or friends.
  - *Pins hopes on the "big win."* The problem gambler believes the big win will solve financial and other problems.
  - *Promises to cut back on gambling.* The problem gambler is unable to reduce or stop gambling.
  - *Refuses to explain behaviour, or lies about it.* The problem gambler may be away from home or work for long periods of time, or may make an unusually high number of personal telephone calls.
  - *Feels frequent highs and lows.* If unable to gamble, the problem gambler misses the thrill of the action and may be bad-tempered, withdrawn or restless. During a winning streak, the gambler is on a high.
  - *Boasts about winning.* The problem gambler loves to relive a win but will make light of losses when others express their concern.
  - *Prefers gambling to a special family occasion.* The problem gambler may arrive late or miss family events such as birthdays, school activities and other family events.
  - *Seeks new places to gamble close to home and away.* The problem gambler may insist that evenings out or even family vacations are at places where gambling is available.

How many Albertans gamble?

- According to a study released in 2002, 82.0% of adult Albertans (18 and older) are current gamblers. This compares to 90.3% who were current gamblers in 1994 and 87.4% in 1998.
- The vast majority of Albertans who gamble do so responsibly. They gamble for entertainment or for social reasons and do not bet more than they can afford to lose.

How many teens in Alberta gamble?

- The prevalence of problem gambling among adolescents is higher than the adult rate in Alberta, and is among the highest reported in similar studies done elsewhere in Canada and the United States.
- Results from The Alberta Youth Experience Survey (2002), showed that 41.2% of Alberta students (grades 7 to 12) had participated in one or more gambling activities in the previous year.
- This same survey also revealed that 9.5% of students were gambling at levels considered hazardous or problematic.

What is the legal gambling age in Alberta?

- The legal age for gambling in Alberta is 18.

How many problem gamblers are there in Alberta?

Since 1994, the prevalence of problem gambling in Alberta has remained stable at about 5%. Based on 2001 population figures for Alberta, this represents approximately 111,000 people who experience mild to more severe problems with gambling. Severe difficulties can include spending all the family savings and incurring immense gambling debts, loss of job, marital or family difficulties, criminal activities such as theft and embezzlement to finance gambling, and health problems such as depression.

- Among Aboriginal adults in Alberta, the prevalence of problem gambling is three times (17%) that of the general population (5%). Some research suggests the rate of problem gambling among Aboriginal adults is as high as 25%.

How many AADAC clients receive treatment for gambling only?

- In 2003/04, 9% of AADAC clients sought treatment for gambling problems alone.

What are the three most common gambling activities AADAC clients are involved in?

- In 2003/04, the most common gambling activities adult clients reported involvement in were playing the lottery (37%), buying instant win tickets (31%) and playing VLTs (31%).

How much revenue does the Alberta Government get from gambling?

In 2003/04, Alberta Government revenue from VLTs, ticket lotteries and slot machines was $1.2 billion. Almost half of this revenue ($577,000) came from VLTs and more than one-third ($479,000) came from slot machines.

AIDS

What is AIDS?

- AIDS (acquired immune deficiency syndrome) is a disease caused by a viral infection that weakens the immune system resulting in the development of life-threatening infections and/or cancers.
- AIDS is caused by the human immunodeficiency virus (HIV). The virus has been found in blood, semen, breast milk and urine. It has also been found in small amounts in saliva and tears and in other body fluids and tissues.
- AIDS is the later stage of HIV infection. During the early stage, patients may have no symptoms or they may develop less severe complications.

How is HIV transmitted?

- The virus is transmitted primarily through sexual contact, mainly by unprotected vaginal and anal intercourse.
- The virus is also transmitted through shared use of contaminated needles and syringes, particularly by injection drug users. Before the screening of the blood supply began in Canada in 1985, the virus was also transmitted through administration of infected blood products.
- The virus can also be transmitted from an infected mother to her newborn child.
- There is no evidence that HIV can be transmitted through ordinary social or occupational contact.

Who is at risk for contracting HIV infection?

- Sexually active homosexual men account for the majority of new HIV cases in Alberta (40% in 2003). People who use drugs by injection are a second primary risk group (22% of HIV cases in 2003).
- Heterosexual partners of infected persons and children born to infected mothers are also at high risk.
- The risk of transmission to health care professionals appears to be low, but the infectious nature of the syndrome does call for strict compliance with infectious disease control procedures.

How many people have died due to AIDS?

TABLE 2: Mortality due to AIDS as of December 31, 2003

CUMULATIVE TOTALS	CANADA	ALBERTA
Number of Cases Diagnosed	19,344	1,162
Number of Deaths	13,010	728

- The number of Canadians with AIDS is increasing in all regions in Canada. The rise is particularly pronounced among women and injection drug users. As well, known cases of AIDS have increased among federal inmates and among the Canadian Aboriginal population.

How can HIV be treated?

- There is still no cure for AIDS and no vaccine is yet available to prevent HIV infection.
- Medical treatment of HIV infections includes treatment with antiviral drugs, attempts to stimulate the immune system, antibiotic treatment of specific infections and anti-cancer treatment for cancers associated with AIDS.

- Supportive counselling, information and drug treatment programs are important components of treatment for persons with HIV and those in high-risk groups.

Treatment and prevention of substance abuse, and gambling problems

What is AADAC's treatment and prevention philosophy?

- AADAC's approach in treating and preventing addiction problems is to focus on the person and provide opportunities for the individual to build on his or her strengths and abilities.
- AADAC also focuses on the family and community to help build their capacity to identify and address challenges associated with substance use and gambling.
- AADAC's mission is to make a difference in people's lives by assisting Albertans to achieve freedom from the harmful effects of alcohol, other drugs and gambling.

How are AADAC services organized?

AADAC provides a comprehensive network of services that include

- 26 AADAC area offices and three urban clinics that provide prevention and treatment services to individuals and families concerned about substance use and gambling
- three detoxification centres that provide a safe environment for withdrawal from alcohol and/or other drugs
- three residential treatment facilities, including the Business and Industry Clinic, which provides specialized intensive programs within a protective and supportive environment
- two youth treatment centres that provide specialized intensive day treatment and residential support programs for teens
- 32 funded Agencies and programs

What services does AADAC offer?

- AADAC and its Funded Agencies offer a range of treatment services, including detoxification and shelter, assessment and referral, individual, family, and group counselling, day and residential treatment; and specialized services for adolescents, Aboriginal people, and women.
- AADAC services are extensive. Each year close to 30,000 clients receive treatment and more than 97,000 people attend prevention activities or receive information from AADAC.
- AADAC services are accessible. With a province-wide network of programs, Albertans have access to information, prevention and treatment services in the communities where they live and work.
- AADAC treatment is effective. Ongoing monitoring of treatment outcomes shows that the majority of clients are satisfied with the services they receive and a majority of clients report that they are abstinent or improved following treatment.
- AADAC services provide a good return on investment. Extensive North American studies demonstrate the value of specialized addiction services as a cost-effective and holistic alternative to hospital care.

What is Alcoholics Anonymous?

- Alcoholics Anonymous is a fellowship of people who meet to deal with alcohol problems.
- The program consists of meetings at which members share experiences, and help each other to maintain sobriety.
- Alcoholics Anonymous is not associated with any other political, social or religious organization. It is supported through voluntary member contributions.

Is it helpful to force someone into treatment for alcohol, tobacco, other drug or gambling problems?

- Successful treatment requires co-operation of the client.
- More effective than forcing someone into treatment is helping them to realize the problems that alcohol, tobacco, other drugs or gambling are causing in their lives, and the consequences that will result from continued substance abuse and/or problem gambling, such as loss of job, family or health.

Is abstinence the only answer?

- Traditionally, total abstinence was presumed a necessary condition for successful treatment of alcohol and drug abuse and for many it is still the most appropriate goal.
- More recent studies suggest that some people with alcohol or gambling problems, particularly those in the earlier stages, can successfully return to controlled social drinking or gambling.

For further information, contact your local AADAC office.

AADAC

Alberta Alcohol and Drug Abuse Commission
An Agency of the Government of Alberta

For more information, contact your local AADAC office,
call 1-866-33AADAC or visit our website www.aadac.com

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